Remarks/Arguments

The foregoing amendments in the specification and claims are of formal nature, and do not add new matter.

Prior to the present amendment, claims 39-51 were pending in this application and were rejected on various grounds. Claim 48 has been cancelled. The rejection to the remaining claims is respectfully traversed.

Specification

The specification has been objected to for containing embedded hyperlink and/or other form of browser-executable code. The foregoing amendment, which deleted all embedded hyperlinks, is believed to overcome this objection.

Claim Rejections – 35 USC §101 and §112

6) Claims 39-51 are rejected as allegedly not being supported by either a credible, specific and substantial asserted utility, or a well established utility.

Applicants disagree, and respectfully traverse the rejection.

Utility – Legal Standard

According to the Utility Examination Guidelines ("Utility Guidelines"), 66 Fed. Reg. 1092 (2001) an invention complies with the utility requirement of 35 U.S.C. § 101, if it has at least one asserted "specific, substantial, and credible utility" or a "well-established utility."

Under the Utility Guidelines, a utility is "specific" when it is particular to the subject matter claimed. For example, it is generally not enough to state that a nucleic acid is useful as a diagnostic without also identifying the conditions that is to be diagnosed.

The requirement of "substantial utility" defines a "real world" use, and derives from the Supreme Court's holding in *Brenner v. Manson*, 383 U.S. 519, 534 (1966) stating that "The basic *quid pro quo* contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility." In explaining the "substantial utility" standard, M.P.E.P. 2107.01 cautions, however, that Office personnel must be careful not to interpret the phrase "immediate benefit to the public" or similar formulations used in certain court decisions to mean that

products or services based on the claimed invention must be "currently available" to the public in order to satisfy the utility requirement. "Rather, **any reasonable use that an applicant has identified for the invention that can be viewed as providing a public benefit should be accepted as sufficient**, at least with regard to defining a "substantial" utility." (M.P.E.P. 2107.01, emphasis added.) Indeed, the Guidelines for Examination of Applications for Compliance With the Utility Requirement, set forth in M.P.E.P, 2107 II (B) (1) gives the following instruction to patent examiners: "If the applicant has asserted that the claimed invention is useful for any particular practical purpose . . . and the assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility."

Finally, the Utility Guidelines restate the Patent Office's long established position that any asserted utility has to be "credible." "Credibility is assessed from the perspective of one of ordinary skill in the art in view of the disclosure and any other evidence of record . . . that is probative of the applicant's assertions." (M.P.E.P. 2107 II (B) (1) (ii)) Such standard is presumptively satisfied unless the logic underlying the assertion is seriously flawed, or if the facts upon which the assertion is based are inconsistent with the logic underlying the assertion (Revised Interim Utility Guidelines Training Materials, 1999).

Proper Application of the Legal Standard

Applicants submit that the gene amplification data provided in the present application are sufficient to establish a specific, substantial and credible utility for the PRO343 polypeptide.
Gene amplification is an essential mechanism for oncogene activation. It is well known that gene amplification occurs in most solid tumors, and generally is associated with poor prognosis. As described in Example 92 of the present application, the inventors isolated genomic DNA from a variety of primary cancers and cancer cell lines that are listed in Table 8 (pages 230-234 of the specification), including primary lung cancers and colon cancers of the type and stage indicated in Table 8 (page 227). As a negative control, DNA was isolated from the cells of ten normal healthy individuals, which was pooled and used as a control (page 222, lines 34-36). Gene amplification was monitored using real-time quantitative TaqMan PCR. The gene amplification results are set forth in Table 9. As explained in the passage bridging pages 222 and 223, the results of TaqMan PCR are reported in Ct units. One unit corresponds to one PCR cycle or approximately a 2-fold amplification, relative to control, two units

correspond to 4-fold, 3 units to 8-fold, etc. amplification. PRO343 showed 1.15-3.82 fold gene amplification in a number of lung and colon tumors.

In assessing the value of these data, the Examiner notes that: "...PRO 343 expression is increased in some tumor cell lines. The mere overexpression of a protein without some knowledge of its function or use would provide neither a specific nor well-established utility." The attached Declaration by Audrey Goddard clearly establishes that the TaqMan real-time PCR method described in Example 92 has gained wide recognition for its versatility, sensitivity and accuracy, and is in extensive use for the study of gene amplification. The facts disclosed in the Declaration also confirm that based upon the gene amplification results set forth in Table 9, one of ordinary skill would find it credible that PRO343 is a diagnostic marker of human lung and colon cancer. It is, of course, true that further research would be needed to develop PRO343 into a diagnostic product. Such follow-up tests could include the mapping of the PRO343 gene to a chromosome, which could be followed, for example, by dual-color FISH with DNA probes complementary to the PRO343 gene and the centromere of the chromosome to distinguish a locus-specific gene amplification from chromosome aneuploidity. However, the fact that such follow-up tests might be necessary, cannot properly lead to the legal conclusion that PRO343 lacks patentable utility.

As set forth in M.P.E.P, 2107 II (B) (1), if the applicant has asserted that the claimed invention is useful for any particular practical purpose, and the assertion would be considered credible by a person of ordinary skill in the art, a rejection based on lack of utility should not be imposed. The attached Declaration by Audrey Goddard establishes that the asserted utility is viewed to be " credible" by one skilled in the art. Indeed, the logic underlying Applicants' assertion that PRO343 is a diagnostic marker of lung and colon cancer cannot be viewed as "seriously flawed," and the facts upon which the assertion is based are not inconsistent with the logic underlying the assertion. It is always possible that an invention fails on its way of development to a commercial product. Thus, despite recent advances in rational drug design, a large percentage of drug candidates fail, and never make it into a drug product. However, the USPTO is not the FDA, the law does not require that a product (drug or diagnostic) be currently available to the public in order to satisfy the utility requirement.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the present rejection.

Claims 39-51 were rejected under 35 USC § 112, first paragraph, for alleged lack of sufficient written description. The Examiner noted that the claims reciting various degrees of sequence identity with the sequence specifically disclosed did not require that the polypeptide possess any particular biological activity, nor any particular conserved structure, or other disclosed distinguishing feature.

The claims as currently amended recite that the polypeptides are associated with the formation or growth of lung or colon tumor. This biological activity, coupled with a well defined, and relatively high degree of sequence identity is believed to sufficiently define the claimed genus, such that one skilled in the art at the effective priority date of the present application would be reasonably accepted that the inventors were in the possession of the invention as claimed. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the present rejection.

The present application is believed to be in *prima facie* condition for allowance, and an early action to that effect is respectfully solicited.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 08-1641 (Attorney Docket No.: 39780-1618P2C48). Please direct any calls in connection with this application to the undersigned at the number provided below.

Respectfully submitted,

Date: March 11, 2003

Ginger R. Dreger,
Reg. No. 33,055

HELLER EHRMAN WHITE & McAULIFFE LLP
Customer No. 35489
275 Middlefield Road
Menlo Park, California 94025
Telephone: (650) 324-7000
Facsimile: (650) 324-0638